

WHAT IS CLAIMED IS:

1. An optical process unit comprising: /

5 a filtering means that discriminates a colored light which has a predetermined wavelength range from a white light and filtrates said colored light off said white light,

10 a polarizing means that selects a certain polarized light component from said colored light so that light component of said colored light is compliant to a linearly polarizing direction of said polarizing means and passes said linearly polarized light therethrough,

a resolution means that resolves said colored light passing through said polarizing means at a predetermined wavelength into a first light beam and a second light beam,

15 a first orientating means that changes direction of said first light beam to a first reflective display device and passes a reflected light of said first light beam at said first reflective display device,

20 a first image information superimposing means that superimposes an image information onto said first reflected light of said first light beam at said first reflective display device, which rotates polarization of said first light beam by 90 degrees from said first light beam, so that a first image light beam is generated by reflection thereat,

25 a second orientating means that changes direction of said second light beam to a second reflective display device and passes a reflected light of said second light beam at said second reflective display device,

30 a second image information superimposing means that superimposes an image information onto said second reflected light of said second light beam at said second reflective display device, which rotates polarization of said second light beam by 90 degrees from said second light beam, so that a second image light beam is generated by reflection thereat,

35 an image light composing means that composes said first image light and said second image light into a single image light,

and

said first orientating means, said second orientating means, said first reflective display device, said second reflective display device and said image light composing means
5 are arranged in an alignment such that said first image light and said second image light are collimated to be composed into said single image light.

2. A first reflective display and a second reflective
10 display device according to Claim 1, wherein;
said first reflective display and said second reflective display device are constructed with reflective liquid crystal display devices.

3. An optical processing unit according to Claim 1,
15 wherein;
said predetermined wavelength range is included in a wave length of green light defined in a display primary.

4. A stereo image generation system comprising:
20 a first pair of projection devices which have optical processing units according to claim 3 and projection lenses, wherein polarizations of a pair projected lights thereby are orthogonal each other,
25 a second pair of projection devices which project linearly polarized image lights composed in two single image lights, of which wave lengths are those of red-color light and blue-color light, respectively,

wherein polarizations of one of said two single image
30 lights and the other of said two single image lights are orthogonal each other

a screen on which said pair of projected lights from said first pair of projection devices and said pair of two single image lights projected from said second pair of projection
35 devices are projected and reflected.

5. A stereo image generation system according to Claim 4 wherein;

polarizations of a pair of projected lights projected by said first pair of projection devices, polarizations of a pair of projected lights projected by said second pair of projection devices and polarizations of a pair of projected lights projected by said third pair of projection devices are all in same direction, and

two half wave length plates, one used for one of a pair of said first pair of projection devices and the other for one of the said second pair of projection devices, are further included by which polarization direction of one of a pair projected lights from said first pair of projection devices, polarization direction of one of said two single image lights are rotated in 90 degrees.

6. An optical processing method comprising:

a filtering step that discriminates a colored light which has a predetermined wavelength range from a white light and filtrates said colored light off said white light,

a polarizing step that selects a certain polarized light component from said colored light so that light component of said colored light is compliant to a linearly polarizing direction of said polarizing means and selects said linearly polarized light,

a resolution step that resolves said colored light selected in said polarizing step at a predetermined wave length into a first light beam and a second light beam,

a first orientating step that changes direction of said first light beam to a first reflective display device and passes a reflected light of said first light beam at said first reflective display device,

a first image information superimposing step that superimposes an image information onto said first reflected light of said first light beam at said first reflective display device, which rotates polarization of said first light beam by

90 degrees from said first light beam, so that a first image light beam is generated by reflection thereof,

5 a second orientating step that changes direction of said second light beam to a second reflective display device and passes a reflected light of said second light beam at said second reflective display device,

10 a second image information superimposing step that superimposes an image information onto said second reflected light of said second light beam at said second reflective display device, which rotates polarization of said second light beam by 90 degrees from said second light beam, so that a second image light beam is generated by reflection thereof, and

15 an image light composing step that composes said first image light and said second image lights into such a single image light, that said first image light and said second image light are collimated to be composed into said single image light.